

REMARKS/ARGUMENTS

Claims 1–20 are pending in the above-captioned application. Of these, claims 1–3, 7–11, and 17–20 stand rejected, and claims 4–6 and 12–16 are withdrawn from consideration. With this paper, claims 1, 12, and 17 have been amended. No new matter was added with the amendment.

I. Priority

Applicants acknowledge the Examiner's determination of priority. The specification has been amended to reflect the issuance of U.S. Patent No. 6,632,655.

II. Claim rejections under 35 U.S.C. § 112, first paragraph

Claims 1–3, 7–11, and 17–20 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner alleges that the previously presented limitation “wherein the narrow channel is deeper than the broad channel” is not supported by the originally filed specification and/or claims. The Examiner also alleges that Applicants have not provided “any indication where such support exists.”

Applicants apologize to the Examiner for failing to note this new rejection at the end of the Examiner's responses to Applicants' arguments in the Office action mailed September 22, 2007. In their response mailed June 10, 2006, Applicants directed the Examiner to page 12 of their application, lines 2–4 of paragraph 0062. The reference should have been to page 12, lines 2–4 of paragraph 0061. Applicants apologize for their error. Applicants also wish to direct the Examiner to Figures 4B and 4C, which clearly show that narrow channels 4045 and 4050 are deeper than the broad channel within which they reside. Figures 4B and 4C were discussed at length in Applicants' previous response.

With the support provided above, Applicants respectfully assert that claims 1–3, 7–11, and 17–20 should be found to comply with the requirements of 35 U.S.C. § 112, first paragraph.

III. Claim rejections under 35 U.S.C. § 102(e) as allegedly anticipated by Parce et al.
(US 5,942,443)

Claims 1–3, 7–11, and 17–20 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Parce et al. (US 5,942,443). This rejection is respectfully traversed. “[F]or anticipation under 35 U.S.C. § 102, a single reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.” MPEP § 706.02. “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, USPQ2d 1913, 1920 (Fed. Cir. 1989).

With regard to independent claims 1 and 17, at a minimum, Parce et al. do not teach “a broad channel with a narrow channel within and extending in the same direction as the broad channel, wherein the narrow channel is deeper than the broad channel.” The underlined limitation has been added to claims 1 and 17 to more particularly point out and distinctly claim Applicants’ invention. Support for the limitation can be found, for example, in Figures 4A–4C of the present application. See, in particular, Figures 4A and 4C, which show narrow channels 4045 and 4050 extending in the same direction as broad channel 4070. Thus, no new matter has been added by the amendment of the claim.

The Examiner alleges on page 3 of the current Office action that Figures 3 and 4 of Parce et al. illustrate structures corresponding to Applicants’ narrow channel within a broad channel. The Examiner has stated parallel reaction channels 312–324 of Parce et al. correspond to Applicants’ claimed narrow channel, and sample injection channel 304 corresponds to Applicants’ claimed broad channel. The Examiner then alleges, “As shown in figure 3, the parallel reaction channel is within the sample injection channel, and is ‘deeper’ than the sample injection channel, and in addition the bead flow into the parallel reaction channel.”

Applicants previously argued that parallel reaction channels 312–324 were not “within” sample injection channel 304, instead intersecting with the sample injection channel. In the Examiner’s response to Applicants’ arguments beginning on page 4 of the current Office action, the Examiner states that at the intersection of the channels, a portion of each narrow channel 312–324 is within the broad channel 304. Applicants do not believe there is any evidence to support that the narrow channels 312–324 extend into the broad channel 304, thereby

forming a narrow channel within a broad channel, wherein the narrow channel within the broad channel is deeper than the broad channel. Fluid communication, in and of itself, does not dictate that the depth of channels 312–324 extends into channel 304. Nonetheless, in the interests of advancing prosecution, Applicants have specified that their claimed narrow channel extends in the same direction as their claimed broad channel, a limitation clearly not met by intersecting channels.

Applicants again refer the Examiner to Figures 4A–4C of the present application, which illustrate a broad channel having two narrow channels within and extending in the same direction as the broad channel. The channel is best seen in Figures 4B and 4C, where narrower, deeper channels 4045 and 4050 are seen within the broad channel that is shown extending from 4060 to 4070. As is clearly seen in Figure 4B, the broad channel extends across the two narrow channels, enclosing the narrow channels in the interior of the broad channel. As is also clearly seen in Figures 4A and 4C, the narrow channels extend in the same direction as the broad channel.

Referring now to Figures 3 and 4 of Parce et al., it is clear that none of the parallel reaction channels 312–324 extends in the same direction as the sample injection channel 304. All of parallel reaction channels 312–324 intersect sample injection channel 304. As indicated by arrows 340 in Figure 3, and as described in column 16, lines 38–58, compounds are serially injected into sample injection channel 304 and are then directed into, and assayed in parallel in, reaction channels 312–324. Thus, a sample passes out of sample injection channel 304 and into reaction channels 312–324. Reaction channels 312–324 are neither within sample injection channel 304 according to the usual interpretation of the term “within” nor do they extend in the same direction as sample injection channel 304.

Thus, Parce et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicants in as complete detail as is contained in currently amended independent claims 1 and 17. Withdrawal of the rejection of these claims under U.S.C. § 102(e) as being anticipated by Parce et al. (US 5,942,443) is, therefore, respectfully requested.

Claims 2, 3, and 7–11 depend directly or indirectly from amended independent claim 1, while claims 18–20 depend directly from amended independent claim 17. Therefore,

Applicants respectfully submit that these dependent claims are allowable for at least the same reasons as set forth herein with respect to currently amended independent claims 1 and 17. Withdrawal of the rejection of dependent claims 2, 3, 7-11, and 18-20 under U.S.C. § 102(e) as being anticipated by Parce et al. (US 5,942,443) is also respectfully requested.

IV. Claim rejections under 35 U.S.C. § 102(e) as allegedly anticipated by Parce et al. (US 6,429,025)

Claims 1-3, 7-11, and 17-20 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Parce et al. (US 6,429,025). This rejection is respectfully traversed. US 6,429,025 is a continuation-in-part of US 5,942,443. The two Parce et al. patents contain the same figures having the same reference numbers. Please refer to the arguments presented above, as those arguments equally apply to the present rejection. For the same reasons stated above in section III, withdrawal of the rejection of dependent claims 1-3, 7-11, and 17-20 under U.S.C. § 102(e) as being anticipated by Parce et al. (US 6,429,025) is also respectfully requested.

V. Claim amendments

As noted previously, claim 12, which is currently withdrawn, has been amended to include all of the limitations of product claims 1 and 17 in anticipation of the method of use claims being rejoined with the product claims that have been demonstrated above to be in condition for allowance.

CONCLUSION

For the foregoing reasons, Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned attorney.

Respectfully submitted,

/Ann C. Petersen/
Ann C. Petersen
Reg. No. 55,536

CARDINAL LAW GROUP
1603 Orrington Avenue, Suite 2000
Evanston, IL 60201
Direct: 408-223-2718
Fax: 847-905-7113